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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Paper No. 15

Application Number: 09/323,650
Filing Date: June 01, 1999
Appellant(s): CHUBB ET AL.

Kent N. Stone

For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed August 5, 2002.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

The rejection of claims 1-17 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

(8) Claims Appealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

4,576,486	DILS	3-1986
5,447,786	ROSE et al.	9-1995
5,601661	MILSTEIN et al.	2-1997
4,523,315	STONE	6-1995
4,794,619	TREGAY	12-1988
4,625,389	READHEAD	12-1986

(10) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 10, 13, 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by Dils. This rejection is set forth in prior Office Action, Paper No. 11.

Claims 2, 3, and 6 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Dils in view of Rose et al.. This rejection is set forth in prior Office Action, Paper No. 11.

Claims 4-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dils in view of Milstein et al.. This rejection is set forth in prior Office Action, Paper No. 11.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dils in view of Stone. This rejection is set forth in prior Office Action, Paper No. 11.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dils in view of Tregay. This rejection is set forth in prior Office Action, Paper No. 11.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dils in view of Readhead. This rejection is set forth in prior Office Action, Paper No. 11.

(11) Response to Argument

A) With respect to the rejection of claims 1, 10, 13, 16 and 17 are rejected under 35 U.S.C. 102(b) as anticipated by Dils:

Applicant's argument stating that Dils does not teach or suggest an emitter having a selective energy emission band as recited in claim 1 is not found to be persuasive because the emitter of the optical temperature sensor disclosed by Dils, in this case a blackbody cavity, emits radiation in the wavelength band of 0.3 μm to 1.0 μm for temperature measurement in the range of 500°-2400°C, as stated in the abstract, and this wavelength band is considered to correspond to the term "selective energy emission band" . Hence it is considered that Dils discloses an optical temperature sensor as recited in claim 1.

B) With respect to the rejection of claims 2, 3, and 6 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Dils in view of Rose et al.:

Firstly, Applicant has incorporated the arguments to the rejection of claim 1 as anticipated by Dils into the arguments presented for the rejection of claims 2, 3 and 6. Said arguments have been addressed above.

Applicant further argues that neither Dils nor Rose teach, suggest or motivate the use of a selective emitter as a substitute for a blackbody in general, nor as a temperature sensor in particular and that there is no motivation found in either Dils nor Rose to combine their teachings or, more particularly, to substitute the emitter of Rose for the emitter of Dils.

However, it should be noted that claim 1 recites " an emitter having a selective energy emission band", which is disclosed by Dils and claim 2, 3, and 6 further limit the particular material of the emitter. The claim language does not refer to a selective emitter.

Rose shows selective infrared line emitters comprised of the materials recited in claims 2, 3, and 6 and sets forth a relation between a blackbody radiator and a selective infrared line emitter, describing the use of selective infrared line emitters for conversion of thermal energy into radiation of a narrow bandwidth and stating that the "intensity of a given wavelength radiated by a blackbody is a function of the temperature, and it is this temperature which also will determine the efficiency of a selective line emitter"(Col. 2, lines 11-14). Dils discloses the use of a structure which emits radiation within a selective emission band as a function of its temperature in combination with a radiation detector for temperature measurement, in this case a blackbody cavity. Hence, the teaching of Rose would suggest to one of ordinary skill in the art that an emitter structure which is comprised of the materials recited in claims 2, 3, and 6, such as a selective infrared line emitter shown by Rose, can also be used as an emitter structure in combination with a corresponding radiation detector for temperature measurement.

C) With respect to the rejection of claims 4-5 and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dils in view of Milstein et al.:

Applicant has incorporated the arguments to the rejection of claim 1 as anticipated by Dils into the arguments presented for the rejection of claims 4-5 and 7-9. Said arguments have been addressed above.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5

USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Milstein shows that selective emitters comprised of, for example, ytterbium oxide, are known to convert thermal energy into optical energy in a narrow emission band in the vicinity of 1μm (see lines 57-60) and Milstein also shows examples of selective emitters comprised of the materials recited in claims 4-5 and 7-9. Further, Dils discloses the use of a structure which emits radiation within a selective emission band as a function of its temperature in combination with a radiation detector for temperature measurement, in this case a blackbody cavity. Hence, the knowledge that said selective emitters radiate in response to temperature would suggest to one of ordinary skill in the art that a selective emitter as that shown by Milstein could be used in combination with a corresponding radiation detector for measurement of temperature.

Applicant also states that the substitution of the emitter of Milstein, which is not a blackbody cavity, into the device of Dils would render the device inoperative since there would be no blackbody emission to be measured. This argument is not found persuasive since Milstein shows as an example a selective emitter having an emission band in the vicinity of 1.0 μm, similar to the emission range of the blackbody cavity of Dils, and the materials of the emitters shown by Milstein have been tested in temperatures in excess of 2000° C and hence it is considered that the emitter of Milstein would perform the same function of converting thermal energy into radiation within a predetermined emission band and would withstand the temperatures being tested by the temperature sensor of Dils.

D) With respect to the rejection of claim 11 as being unpatentable over Dils in view of Stone:

Applicant has incorporated the arguments to the rejection of claim 1 as anticipated by Dils into the arguments presented for the rejection of claim 11. Said arguments have been addressed above.

E) With respect to the rejection of claim 12 as being unpatentable over Dils in view of Tregay:

Applicant has incorporated the arguments to the rejection of claim 1 as anticipated by Dils into the arguments presented for the rejection of claim 12. Said arguments have been addressed above.

F) With respect to the rejection of claims 14 and 15 as being unpatentable over Dils in view of Readhead:

Applicant has incorporated the arguments to the rejection of claim 1 as anticipated by Dils into the arguments presented for the rejection of claims 14 and 15. Said arguments have been addressed above.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

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